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For the American Medical Intelligencer.

Art. I.—TREATMENT OF SNAKE-BITE.

BY W. BECK DIVER, M. D.

[The following communication was recently received from the zealous author, who left his country as a missionary, to bestow his valuable services on the benighted inhabitants of oriental regions. We hope his health may permit him to live long in his useful and benevolent career; and that we may receive from him—from time to time—the fruits of his observation and reflection.

We have likewise from him a History of Vaccination in China, which shall appear in our next number.—Ed.]

Macao, May, 1840.

To the Editor of the American Medical Library and Intelligencer.

My Dear Sir,

The following history of the "Treatment of Snake-Bite by the Native Practitioners of Bengal," was originally printed in a Bengali paper, called Bhâskar, or The Sun, and subsequently translated and published in the 91st number of the Calcutta Christian Observer for December last. It treats upon a subject of much importance in itself, and makes us acquainted with some native alexipharmics, as well as with the views and practice of the Baidyas, or medical men of Bengal, in regard to the action and counteraction of serpentine poison. It is for *practical* men to decide how far the Esculapius of Bengal is either rational in his theory or judicious in his treatment of his patients.

It will doubtless interest your readers as well as serve the cause of humanity and science.

Most respectfully yours,

W. Beck Diver.

Treatment of Snake-Bite by the Native Practitioners of Bengal.

"There are many varieties of snakes or serpents;—among these the four following abound in this province, viz. the Gokhura, or cow-hoofed snake, a species of Cobra di Capello, so called from a real or fancied resemblance in the spectacle to the prints of a cow's hoof; the Keütiyá, or black serpent, the black Cobra di Capello (Coluber Naja or Nága); the Kánor, or arrow-snake, a species of serpent which, attaching itself to trees, darts thence like a *bolt* upon its prey; and the Borá, or large boa constrictor. The bites of all these are fatal to life.

"The poison of the three first, viz. the Gokhura, the Keŭtiyá, and the Kánor, is excessively virulent and rapid in its operation. When a person has been bitten by any of these, the virulence of the venom, so to speak, instantly affects the sight,—the patient's eyes inflame, and presently he swoons away. Still the poison does not spread itself beyond the wounded part for the space of half an hour; after about that lapse of time it begins to make its way into the blood-vessels. For half an hour, therefore, following the bite, there is no danger to life; within that period, however, an iron, heated red hot, must be applied to the wounded part.[1] If this cannot readily be done, then let a bandage, drawn very tight, be applied a little above the part; then as the poison begins to ascend the vessels, the surface over them will swell or puff up successively in spots, as if a small pea or similar nodule were passing on. The moment of swelling must be very carefully watched, because the subsequent subsidence is instantaneous. Keeping, then, the eye steadily fixed upon the passage within of the poisonous *goutte*, let an incision be made with a sharp instrument at the distance of three fingers' breadth above the rising or gibbosity it occasions, so as to sever the vessel, when the poison will spurt out at the opening and fall to the ground. If, however, the operator be unable from inexperience to detect this,—to a common eye, not very perceptible symptom, another easy course in that case is as follows. As the poison cannot readily pass beyond the place of ligature, it there causes a fulness like the gradual swelling or inflation of a leech in sucking, seeming to strike against the bandage, or against a barrier to its passage, and then receding from the shock. This appearance is easily discernible. Now, if an incision be made just at the point of retrocession, the venom will instantly flow out with force through the opening made. Then loosening the bandage, let some salt be applied to the wound. The patient will suffer no further inconvenience.

"The mode of treating the bite of the Borá (or Boa constrictor) is different, except in so far as regards the application of a red hot iron to the wounded part; this is the first process in any case. The reason for this difference is, that the poison of the Borá does not flow readily; two hours only after it has been introduced it begins to gather into globules or drops, to penetrate the muscles and pass into the system. If, however, it have passed beyond the wounded spot, then let the part directly above the wound be divided with the knife, to ascertain how far it has passed. For no blood will flow where the venom has reached, nor is the patient sensible to pain from any incision made there. Where, however, blood flows upon incision, let the hot iron be applied all round the limb, leaving an armlet, as it were, of cauterised muscle; whereupon the venom will discharge itself through the opening, mingled with serous blood. This is the only *certain mode* of cure for the bite of the Borá,—failing which the patient runs the extremest risk of his life.

"Where, however, the above process has not been adopted, there is one mode of treatment which is applicable in all cases of snake-bite. It is this. As soon as the patient is seen to totter and fall, let a strong fire be immediately kindled close to his head. Then let a couple of earthen pots (or cooking pans) be brought and laid empty upon the fire. When these are thoroughly red, let one of them be taken up with a pair of tongs and held very carefully, mouth downwards, over the patient's head, so as, while it does not touch the head in any wise, yet to enclose it partially within its cavity. When one vessel cools, let the other be similarly applied. This course must be persevered in for at least two full hours, whereby a profuse perspiration will be excited over the patient's whole body, with which the poison will escape in a watery state. The patient will soon begin to open his eyes, and after a while will find himself quite recovered. Those who

[1] The actual cautery here prescribed is a favourite remedy in native practice on many occasions, as in treatment of disease of the spleen, &c. &c.—W. B. D.

practise the cure of snake-bite term this mode of treating it Brahmajál (or *Brahma's magic power*), from the effect produced. It is effectual, however, only if applied while the poison remains confined to the head,—for if it once enter the abdomen, Dhanwantari (physician to the gods) himself must give up his case as utterly hopeless.

"The people of this country believe that poison may be counteracted by charms; and as some cases have occurred in which persons bitten by snakes have recovered for whose cure charms had been employed, they have been confirmed in their belief. In our opinion, however, this is a groundless persuasion: our reason for which we freely give. The bites of snakes are of two kinds; one in which the tooth or fang has only scratched the surface—this is attended with no risk of life, because the reptile's venom being open to the influence of the outer air of the atmosphere, is prevented by it from spreading: the air mixing with or passing through the poison, diminishes its virulence and neutralises its noxious quality.[1] Hence it is that snake charmers in such cases, after reciting their incantations, conclude by striking two or three smart taps upon the wounded limb, when the patient, fully confiding in the efficacy of the process, instantly sits up quite recovered! The by-standers, too, and others, all believe the cure to have been effected by the charm.

"In the second case of snake-bite, however, that is, where the fangs of the creature have struck deeper and penetrated the muscle, charms are of no avail: when the enchanter (to cover his inability) declares that Time has stung his patient! The simple truth, however, is, that in these cases the venom has not been reached by the outer air; whence, in spite of incantations, however oft repeated, it spreads through the system, and the man expires!

"The teeth of the serpent are not universally furnished with poison. Just beneath the eyes of this class of reptiles are two elongated fangs, resembling the beard or very fine feelers of some small fishes. These are tubular, and would admit the passage of a hair. Through these tubes the poison flows. The poison of a serpent resembles honey in appearance and degree of consistence. Take a snake and place a metal vessel before it—if it dart its fangs thereat, its poison will flow into the vessel; a drop of blood placed in contact with the poison will not mix with it. Nor will swallowing it be attended with any danger to life: it will only cause a redness of the eyes and relaxation of the system, similar to what are produced by drinking of any intoxicating liquor. A little lime juice, however, is an effectual cure for these effects. Indeed lime juice is a specific generally in cases of snake-bite. It sometimes happens that the eating of fruit which has been previously bitten by a serpent is followed with loss of life; yet a dose of half a poyá (weight) about 7 ounces avoirdupoise, of lime juice, would have prevented the fatality; for want of a knowledge of the remedy a man dies!

"We have, in the above, treated the subject but slightly, yet are fearful our readers may think we have written too much already. We will therefore only add, in conclusion, that we had tested our prescriptions by previous experimental practising upon goats, &c., and that subsequently many individuals who had been bitten by snakes, in following the same course have been cured."

To Professor Dunglison, Philadelphia.

[1] From this opinion (which I think is not supported by fact) I beg leave to differ. It is not clear that the abrasion of the cuticle by the fangs of the snake is unattended by risk, nor that the exposure to the atmosphere neutralises the poison, because the vaccine virus is introduced into the system by a mere scratch with the point of a lancet, and if there were any counteracting powers in the atmosphere, they would certainly be effectual in this case.—W. B. D.

Art. II.—ANATOMICO-PATHOLOGICAL RESEARCHES ON CIRRHOSIS OF THE LIVER.

BY ALFRED BECQUEREL, PARIS.[1]

The name cirrhosis was given by Laennec to a peculiar affection of the liver, in which that organ appears as if filled with numerous yellow granules, which are sometimes present in such numbers that the surface of a section of the liver presents an uniform yellow colour. If this surface is carefully examined, M. Becquerel says an innumerable quantity of minute granulations may be discovered, which may be compared to the lobules of hardened and reddish-coloured fat which are commonly found in the subcutaneous cellular tissue of the thigh and leg of anasarcous subjects. These little masses are sometimes intimately united to the texture of the liver, but they are frequently separated from it by a thin layer of cellular tissue, which forms a slight envelope round the globules, from which they are easily detached.

The exact nature, the causes, and the symptoms of this affection, are very imperfectly understood; and it is for the purpose of elucidating these points that M. Becquerel has published the present memoir. Laennec considered that in this disease a new morbid product was deposited in the liver, which he termed "cirrhose," and which he believed might be also developed in other organs of the body; appearing first in a state of crudity and afterwards softening. Andral states that the granules, in his opinion, merely arise from hypertrophy of the white or secreting part of the liver, which in the more advanced stages is accompanied with corresponding atrophy of the red or vascular tissue, giving rise to that shriveled state of the liver generally, which was described by Laennec as frequently occurring in this disease. M. Cruveilhier considers that cirrhosis consists in atrophy of a great number of the lobules of the liver, and a corresponding degree of hypertrophy of those which remain, which causes the irregular granulated surface. Dr. Carswell, who gives an admirable description and delineation of this disease in the article atrophy, in his work on Pathological Anatomy, regards it as consisting in atrophy of the lobular structure of the liver, produced by the pressure of a contractile fibrous tissue formed in the capsule of Glisson; an opinion which, as we shall find, very nearly coincides with that adopted by the author of the present paper. M. Bouillaud regards cirrhosis as a disunion of the two natural elements of the liver, the yellow granulations being nothing more than the secreting lobules undergoing disorganisation in consequence of obliteration of the vascular tissue, and consequent obstruction of the hepatic circulation.

M. Becquerel, previously to stating his own opinions on the nature of the morbid alteration of the liver in cirrhosis, briefly reviews the different opinions concerning the intimate anatomical structure of this organ in its natural state; and he adheres to the notion that there are two distinct substances: one yellow, which is the true secreting tissue; and the other red, which consists of the ramifications of veins and arteries. He inclines to the opinion of Cruveilhier, that each lobule possesses a spongy tissue not injectible; and thus widely differs from Mr. Kiernan, who describes the liver as being throughout essentially vascular; the lobule consisting of minute radicles of the biliary ducts, surrounded by a plexus of the terminating branches of the portal veins. The latter eminent pathologist explains the differences in appearance between the red and yellow darts of the liver by the different degrees of injection of the different portions of its tissue.

Admitting, then, the presence in the liver of secreting lobules, into the interior of which no vessels enter, not even the minute ramifications of the

[1] Archives Générales de Médecine, Avril et Mai, 1840; and Br. and For. Med. Rev. Oct. 1840, p. 560.

biliary ducts, which, together with the branches of the vena porta and hepatic artery, form a network round the lobules without penetrating them; the lobules themselves merely consisting of a mass of albuminous corpuscules, as described by MM. Dujardin and Verger; M. Becquerel next endeavours to ascertain which of the tissues—the secreting or the vascular—is the one altered in cirrhosis, and he arrives at the conclusion that it is the latter only. He says that this tissue becomes infiltrated with a yellowish plastic or fibro-albuminous matter, which possesses the properties which characterise fibrine and albumen; for it is coagulated by heat, and by a continued application of that agent, is converted into a horny substance. He considers that this effused matter is analogous in its composition to the false membranes which are developed in mucous, and more frequently serous, tissues; and he says that it undergoes the same changes.

M. Becquerel has determined that in this disease of the liver no pus globules can ever be detected in the altered structure; a very small quantity of fatty matter is likewise present, which is always abundant where pus is met with. He deduces from these facts that cirrhosis does not arise from acute inflammation; the absence of fat will also distinguish this disease from the fatty disease of the liver,[1] in which this organ is likewise of a yellow colour.

This fibro-albuminous matter is supposed to be deposited by interstitial infiltration in the central part of the secreting lobules, and the yellow substance of the liver becomes thus hypertrophied, and causes compression and eventually atrophy of a great part of the red or inter-lobular substance. Many of the vessels and ducts are thus obliterated, and the tissue of the liver becomes difficult of injection. In the most advanced stages of this disease, the effused matter loses great part of the water which entered into its composition, becomes firmer, and contracts in size. It thus undergoes the same changes as false membranes, which are at first soft and thick like white of egg, but which afterwards become organised and firm, and lessen in volume. From the contraction of this matter, the yellow substance of the liver which was at first hypertrophied becomes atrophied, the altered lobules are diminished in volume, and many of them often coalesce, forming the patches which were described by Laennec as occurring in certain forms of this disease, and which give an irregular appearance to the surface or to a section of the liver. When this retraction has taken place, a great portion of the red or interlobular tissue of the liver no longer exists, and we only see an irregular agglomeration of yellow tubercles of different sizes, and the whole organ becomes hardened and shriveled.

The immediate causes of this disease are completely unknown. M. Becquerel conjectures that it may arise from active and long-continued congestion of the liver, consequent upon chronic disease of the lungs or heart (with the affections of which organs cirrhosis is often complicated), or arising from other causes.

Cirrhosis never affects the liver partially, it always attacks all parts of its substance simultaneously. The gall-bladder is almost always quite natural. M. Becquerel has not made any comparative analysis of the state of the bile in this disease, but he found it vary considerably in consistence and colour.

This affection of the liver is mostly complicated with organic disease of other parts, as Bright's disease of the kidney, and various lesions of the heart and lungs; it is rarely met with by itself: M. Becquerel only found seven out of forty-two cases which he could consider as uncomplicated. He classes these complicating diseases under two heads: *First*, Chronic diseases, developed before or at the same time as the cirrhosis. *Second*, Diseases more or less acute, and probably consequences of the cirrhosis. 1. To the first class belong the following:—Lesions of the *Heart*. These are more commonly met with in connection with cirrhosis than any other; for in forty-two subjects examined, the heart was affected with chronic disease in

[1] See Brit. and For. Med Rev. vol. vii. p. 554.

twenty-one cases, or in half; and the disease in all these instances had advanced to such a degree that it must have preceded, if it did not give rise to, the disease of the liver. The disease of the heart in these cases is often complicated with other affections, as emphysema of the lungs and chronic bronchitis, tubercular disease, or Bright's kidney.

It is exceedingly difficult to determine whether the affection of the heart gives rise to that of the liver, and if so, in what manner. M. Becquerel has no doubt that the former precedes the latter in almost all cases, and supposes that it may give rise to it by keeping up a state of continued congestion of the liver. Pulmonary emphysema and chronic bronchitis, which are sometimes found accompanying cirrhosis without disease of the heart, may be supposed to act in its production in the same manner, by obstructing the venous circulation. Cirrhosis is very rarely found in connection with tubercular disease of the lungs. The fatty degeneration of the liver, on the contrary, is a frequent complication of consumption.

The morbid alteration of the *kidney*, known by the name of Bright's disease, frequently accompanies cirrhosis, having been met with fifteen times in forty-two cases. Some differences were observed between these cases of considerable interest; thus in nine cases where cirrhosis and renal disease existed together, and appeared to be of the same standing, old organic lesions of the heart and lungs were also found, which our author considers to have been the exciting causes of the diseases of both the liver and kidneys, repeated congestion of both these organs having been occasioned by obstruction to the circulation. In another series of cases, which includes three out of fifteen, the cirrhosis seemed to be of a much older date than the affection of the kidneys, and probably gave rise to it by obstructing the circulation of the abdominal veins. In the remaining three cases, the disease of the liver and kidneys seemed to be of about the same date, and had been probably developed from a similar cause, the nature of which, however, was unknown.

2. In the second class may be arranged the following:—*Ascites*, which constantly accompanies cirrhosis in the more advanced stages; *Peritonitis*, producing purulent effusion and the formation of false membranes; *Pleuritis* and *hydrothorax; Pericarditis*—this has only been met with in a few cases; *Anasarca*—this generally occurs in complicated cases along with ascites, and when the disease of the liver is in an advanced stage. Besides these, *œdema of the lungs*, *pneumonia*, and *pulmonary apoplexy*, have been met with, as well as congestion of the mucous membrane of the alimentary canal; and *intestinal hemorrhage*, which must be considered as an effect of the disease of the liver, arising from the obstruction of the circulation of the blood through the vena porta.

Cirrhosis is more frequently met with in men than in women: thus of eighteen cases of the simple or uncomplicated form of this disease, twelve occurred in males and six in females. Of the whole number of forty-five cases examined by M. Becquerel, twenty-eight were found in men, and seventeen in women.

With regard to the influence exerted by age, the eighteen simple cases may be thus arranged:

Between	18	and	20	years,	1
„	20	„	30	„	2
„	30	„	40	„	7
„	40	„	50	„	3
„	50	„	60	„	5

Thus persons between thirty and forty seem to be most liable to be attacked by cirrhosis. This disease is also met with in children; and M. Becquerel is disposed to think that it occurs more frequently in young subjects than has generally been supposed.

With regard to the symptoms produced by cirrhosis, none exist sufficiently characteristic to enable the physician to diagnosticate its presence during life. The most constant symptom of this disease in its more advanced stages is dropsy, which always commences in simple cases in the abdomen; its approach is generally unaccompanied by pain, but in a few cases the belly is the seat of pain, either with or without pressure, and the presence of peritonitis is thus indicated. Anasarca sometimes precedes the ascites, but Bright's disease of the kidney or disease of the heart are then always indicated. M. Becquerel says that the state of the urine is always peculiar in this disease; it is of a deep orange and often reddish-yellow colour, very dense, strongly acid, and deposits an unnaturally large precipitate of urate of ammonia, which is of a bright red or cinnabar colour. The causes of this state of the urine are unknown.

The course of this affection is uniform and continued, and it always proceeds more or less quickly to a fatal termination, being apparently uninfluenced by any plan of treatment.

BIBLIOGRAPHICAL NOTICES.

Churchill on the Diseases of the Pregnant and Childbed State.[1]

The "Outlines of the Principal Diseases of Females" was published in the second year of the "Library," and was received with considerable favour. The work before us, which is begun in the present number of the "Library," is entitled to equal attention. The reviewer in the Edinburgh Medical and Surgical Journal thus expresses himself: "Dr. Churchill's present volume is very ably executed, and we have no doubt will soon become a favourite work with the student, and a standard work of reference for the accoucheur and general practitioner. It is the only sytematic treatise on the diseases of pregnancy and the puerperal state that has appeared in England since the publication of the work of Dr. White, of Manchester, on the same subjects, in 1772."

Professor Aiken's Introductory Lecture.[2]

This Introductory Lecture is devoted to the history of the rise and progress of electricity,—a subject appropriate to Dr. Aiken's course in the University of Maryland. It is treated in a manner creditable to him, and one which cannot fail to be useful to his hearers.

MISCELLANEOUS NOTICES.

Pennsylvania Hospital for the Insane at Blockley.—The managers of this hospital have recently appointed Dr. T. S. Kirkbride, of this city, medical superintendent of the noble asylum for the insane, which they

[1] Observations on the Diseases incident to Pregnancy and Childbed. By Fleetwood Churchill, M. D., Licentiate of the King and Queen's College of Physicians, &c. &c. 8vo, Dublin, 1840.

[2] An Introductory Lecture delivered before the Medical Class of the University of Maryland, Sept. 1840. By William E. A. Aiken, M. D., Professor of Chemistry and Pharmacy. 8vo, pp. 32. Baltimore, 1840.

have erected at Blockley. Dr. Kirkbride, we can say from personal knowledge, possesses qualifications which adapt him eminently for the situation, and we look forward with pleasing anticipations to the published results of his observation in a position which offers so many opportunities for the exercise of his professional acquirements.

Mr. Malin, the worthy librarian of the Pennsylvania Hospital, was at the same time appointed steward of the asylum.

Effects of the Operation for Strabismus on Vision.[1]—Dr. Hays made an oral communication relative to the operation recently devised for squinting, and to its effects in modifying the adjusting power of the eye for near and distant objects.

Dr. Hays stated, that certain phenomena which he had observed in one of the cases in which he had divided the internal rectus muscle, for the cure of squinting, seemed to favour the theory of the adjustment being made by an alteration in the form of the eye, under the conjoint action of the four recti muscles; a theory rejected by the best physiologists of the day.

The case, the details of which Dr. Hays related, was that of a gentleman thirty-six years of age, who had squinted with his left eye since the age of five years. Both the eyes were presbyopic, the left, however, was most so, and required for distinct vision a glass three Nos. higher than the other eye; the respective Nos. being 11 and 14. Vision with the left eye, even by the aid of a glass, was not perfect, words printed in long primer being scarcely legible. After the division of the internal rectus muscle, vision not only improved, but the eye became less presbyopic, and at the present time, three weeks since the operation, said Dr. Hays, the glass (No. 14) which had been before adapted to the patient's left eye, now magnifies so much, that it is unpleasant to read with it; and he is able to see best with glass No. 11. On careful comparison, he is unable to perceive any difference in the size of objects viewed with either eye through this glass; and an opera glass, adjusted to one eye, seems equally well adapted for the other. These facts, Dr. Hays remarked, show, that a change has taken place in the left eye, and this probably consists in an elongation of its antero-posterior diameter, resulting from the operation.

Dr. Hays also made some observations on the mode in which squinting causes an impairment of the function of vision, and stated, that from a great number of cases which he had examined, it appeared to him to be a general rule, that the greater the degree of strabismus, the more imperfect is the sight of the affected eye. In all the cases in which he had operated, the sight had been improved.

Dr. Dunglison stated, that he was not prepared to admit, from this single observation, that the accommodating power of the eye is owing to the pressure of the four recti muscles on the eye-ball; the division of any one of them not being likely, in his opinion, to rectify the results of compression, if it existed in the case in question. He was disposed to refer a greater agency to the contraction and dilatation of the pupil in facilitating distinct vision at different distance, and he alluded to an experiment made on one of his own eyes whilst a student of medicine. This consisted in applying some freshly prepared extract of belladonna to the eyelids. The consequence was, that the pupil soon became so much dilated, that the iris was almost invisible. The focus of this eye was found to be at twice the distance of that of the sound organ; but in proportion as the effects of the belladonna passed off, and the pupil approached its natural size, vision became more and more distinct, and the focus nearer the natural. In the open air,

[1] Proceedings of the American Philosoph. Society, No. 13, for August, September, and October, 1840.

all objects, except those near, were distinctly seen, but on entering a room, every thing was obscured.

Dr. Dunglison expressed the belief, that squinting is often owing to impairment of vision in one eye, in consequence to a want of correspondence in the sensibility of the two retinæ; the mind, therefore, acquires the habit of attending to the impression made on the sound eye only, and the other, being neglected, is drawn into a position to interfere as little as possible with the better vision of its fellow.

Professor Bache alluded to a case of strabismus, which seemed to him to favour a suggestion thrown out by Dr. Hays, that defective vision in the inverted or everted eye might be owing to stretching of the optic nerve. In this case the eye became everted; and simultaneously, vision with it was impaired. Ultimately, indeed, the sight of both eyes was lost.

Case of Precocious Puberty. By Thomas B. Peacock, Esq.[1]—Jane Jones was an unusually large child at birth, and grew rapidly; and some time before she attained the age of three years, her breasts were observed to be unusually large. When she was about five years old they underwent a still greater development; the pudendum acquired greater fulness, and the catamenia made their appearance, since which time they have continued to recur regularly. The mons and labia, though without hair, were much more tumid than is natural in a child of her age.

She is now seven years of age; her form is that of a full-grown woman, being broad across the chest, breast, and pelvis; and her limbs are full and rounded. Her face, more particularly the lower part, is large, and her look heavy and childish. She measures 4 feet 3¼ inches, and 29 inches round the chest; her weight is 72 pounds avoirdupois. Her teeth are all of the temporary set, with the exception of the first permanent molar, and the two central incisors of the lower jaw. Her breasts exceed the usual size of these organs in unmarried adults, the gland is large and firm, and they possess the erected nipple, and in some degree the dark areola, of the pregnant state. The mons is very prominent, and presents a considerable growth of hair. Her mother states that the catamenia appear at regular intervals of a month, continuing profusely for two days, and partially during two others, and that the secretion cannot be distinguished either in quality or amount from that of other females. At the catamenial periods, the eyelids acquire a dark hue, and she experiences the ordinary attendant lumbar pains; indeed, she exhibits the usual signs of one in whom this function has become naturally established, and her general appearance is fully that of a girl of thirteen years of age. The mental faculties are not more highly developed than in children of the same age; and in her amusements she is as childish as those of her companions. She, however, displays a degree of modesty in her conduct towards males unusual in children of her age.

Absence of the Mammary Gland in a Woman. By Dr. Froriep.[2]—This remarkable case occurred in a well-formed woman, of about 30 years of age, who gave birth to a healthy infant in the month of December, but died herself of an attack of peritonitis eight days afterwards.

On dissection, it was found that the mammary gland of the left side was well developed, and full of milk; that of the right side was entirely wanting. The skin in this region was smooth, soft, and did not adhere to the subjacent parts; no traces of a nipple were apparent, and, in spite of a minute dissection, not a single granulation could be found which indicated the least rudiment of a gland.

[1] London Medical Gazette, Jan. 3, 1840; and Edinb. Med. and Surg. Journal, April, 1840. p. 520.

[2] Froriep's Notizen, x. 1839; and Edinb. Med. and Surg. Jour. April, 1840, p. 522.

Other anomalies not less remarkable existed on the same side. The third and fourth ribs, in place of ending at the sternum, terminated in a line with the anterior margin of the scapula; these two ribs had their place supplied on the anterior part of the chest by a tendinous structure of sufficient resistance to hinder the lung from being pushed forwards in the form of a hernia. The cartilages of these ribs, however, were found attached to the corresponding part of the sternum, but they were connected together, and also with those of the fifth and sixth ribs. The sternal portion of the greater pectoral muscle, and the whole of the lesser pectoral muscle, were awanting, as well as their tendinous attachments, not the least trace of which could be detected. The *latissimus dorsi* wanted its two digitations, which are usually attached to the third and fourth ribs. It is unnecessary to say that the intercostal muscles proper to these ribs were awanting. Dr. Froriep explains these remarkable appearances by supposing that the developement of the parts had been arrested during the fœtal life by the pressure of the arm upon the corresponding portion of the thorax.

Spontaneous Rupture of the Spleen. By Dr. Nœckel.[1]—A young man, of about 25 years of age, had an attack of diarrhœa, which was not relieved by opium or saturnine preparations. After five days' continuance, the abdominal pains became so severe, that he was forced to confine himself to bed. Next day he was seized with a sensation of sinking, cold sweats, &c. and died in a few hours. On inspection of his body forty-eight hours after death, a large quantity of blood was found effused into the cavity of the abdomen and pelvis, which had proceeded from an angular rent of the spleen of about four lines in extent, situate at the inferior margin of its anterior or external surface. The spleen was about five inches long by four broad; of a livid colour, and with its tissue much softened.

On Pain in the Back in Intermittent Fever. By Dr. Grossheim.[2]—This paper contains the results of observations made in fifty cases of intermittent fever, for the purpose of testing the opinions of Dr. Kremer (noticed in our fifteenth number, vol. viii. p. 67), who had stated that a painful sensation is a constant and pathognomic sign of intermittent fever, on pressure over the first dorsal vertebra and the adjacent parts of the spine, and that there is a constant relation between the severity of this symptom and of the general disease. The following are the results which Dr. Grossheim has obtained, and which seem to confirm Dr. Kremer's statements, although they had been contradicted, as we formerly stated, by the experience of other observers: 1. Pain on pressure on some part of the spinal column is a constant symptom of intermittent fever, except in those cases in which the ligaments of the vertebræ have become by age or disease so rigid that they will not yield to pressure. 2. There is no definite locality to this pain; it may be situated in any part of the column, but is most frequent in the middle of the dorsal portion, especially in quotidian intermittents. 3. The extent of the pain also varies considerably; one or two vertebræ only may be tender; and the pain rarely occupies the space of more than five or six; it may also be situated at distant parts, with intervals in which none is excited by pressure. 4. The intensity of the pain is equally variable. Sometimes it was so severe that the slightest touch of one of the spinous processes produced severe suffering; but sometimes violent pressure was required to detect it. Among those vertebræ that excited pain when pressed, the middle one was commonly the most sensitive; and in those above and below it the tenderness gradually decreased. 5. The pain was more severe during the

[1] Medicinische Zeitung, May, 1839; and Edinb. Med. and Surg. Jour. April, 1840, p. 522.

[2] Medicinische Zeitung, June 3, 1840; and Br. and For. Med. Rev. Oct. 1840, p. 557.

paroxysms than in the intermissions. When the severity of the fever diminished, or the tendency to its returns grew less, the severity and the extent of the pain in the back also decreased; but the complete removal of the fever was not always accompanied by the entire loss of the pain, which often continued in a modified degree after the fever had ceased to return, and remained the longer the more severe it had previously been. 6. Complications of the intermittent fever did not appear to have any influence on the pain; it continued when the character of the fever was altered either for the better or for the worse, and it returned in cases of relapse.

From observing the constant existence of this symptom, the author was induced to try what would be the effect of remedies that would tend to correct the local excitement that seemed to exist. He relates very briefly five cases, in which eight or ten leeches were applied over the spine in the situation where pressure gave the most pain. In four of these no other remedy was required; the pain ceased in a few days, and there was no recurrence of the febrile paroxysm.

Congenital Dislocation of the Humerus reduced after Sixteen Years. By M. Gaillard, Surgeon to the Hotel Dieu, of Poitiers.[1]—The following is an abstract of a report to the Royal Academy of Medicine, drawn up by MM. Cannet and Bouvier. They consider the case as very curious, and without a parallel in the history of surgery.

Mademoiselle L. B. a few days after birth presented a deformity of the left superior extremity, with much pain during its movements. The elbow was thrown from the body, the forearm semiflexed, and the hand in a state of promation. During her infancy she could not bring the elbow near the trunk, nor raise her hand higher than the chin. The limb was often painful during her early years; but latterly the pain had only come on when the limb had been long fixed in one position. When M. Gaillard saw her in 1836, she was sixteen years of age. He found in the posterior part of the shoulder a projection formed by the head of the humerus, which was placed in the subspinous fossa of the scapula, above the middle part of the spine, which was curved by the pressure it had undergone. On moving the arm, the head of the bone was felt rolling under the fingers, and it appeared abraded from rubbing on an irregular surface. The hand could not be brought to a state of supination. The forearm could not be extended on account of the permanent contraction of the biceps. Elevation and rotation of the arm were impossible.

On the 5th of January, 1837, the patient was placed on a stool, a cushion was applied to the external border of the scapula, and maintained by two cords passing from its extremities and attached to two fixed rings. The arm directed horizontally inwards was then submitted to the action of a weight of sixteen pounds. The weight was suspended at the end of a cord which passed through a fixed pulley, and was attached to a bracelet fixed above the elbow. Time after time M. Gaillard increased the power of the traction, occasionally adding his efforts to the force exercised by the weights. The extension, prolonged from twenty to twenty-five minutes, was repeated on the 10th and 11th of January, each time bringing the head of the humerus nearer the glenoid cavity, and with no other inconvenience than a slight pain and swelling of the arm. On the 13th the head of the humerus was more moveable. Further traction was employed, the arm being always placed horizontally. The humerus yielded, glided over the scapula for the space of an inch and a half, and approached the glenoid cavity. M. Gaillard then seized the elbow, and by carrying it backwards and upwards, he directed the head of the humerus downwards and forwards, then lowering the limb, he felt the head pass under the acromial arch, and leap over a projec-

[1] Bulletin de l'Académie Royale de Médecine, Juin 30, 1840; and Br. and For. Med. Rev. Oct. 1840, p. 566.

tion which appeared to belong to the articular cavity. The arm was now in contact with the trunk, it was sensibly lengthened, and all its movements could be executed with ease.

The dislocation, however, recurred again and again, and was as often reduced. The difficulty was to maintain the bone after reduction. This, however, was effected by careful bandaging. The patient suffered considerable pain at times, but was relieved by the application of leeches. From the first reduction to the entire cessation of pain, a period of more than two years elapsed; but the cure was then complete, the patient using the limb equally as well as the other.

New Operation for Prolapsus Ani. By M. Robert.[1]—Relaxation of the sphincter ani being the cause of this disease, all the remedies hitherto employed for its cure are inefficacious when it arrives at the last stage, as they can only act on the mucous membrane of the rectum. These reflections have induced M. Robert to shorten the sphincter in proportion to the amount of relaxation, so that the two cut surfaces of the muscle might unite and form a narrow ring to oppose to the descent of the mucous membrane. This operation was performed with success on a washerwoman, thirty-three years of age, in June, 1839, in the hospital of La Pitié. This woman in her third pregnancy had a prolapsus ani, which was only temporary, though it caused some pain. Her fourth pregnancy produced a prolapsus uteri, a permanent and considerable prolapsus ani, with relaxation of the abdominal walls. M. Robert excised a portion of the mucous membrane with some temporary relief; but the disease afterwards increased, the discharge of fæces became involuntary, and she suffered from pains in the loins and upper part of the thighs. When she entered the hospital, the sphincter was so much relaxed that four fingers could be easily introduced.

The patient having been prepared for the operation by progressive diminution in diet, and the use of opium in order to effect long-continued constipation, M. Robert proceeded to operate in the following manner: An incision was made on each side of the anus, each incision being commenced a few lines external to the orifice, and carried backwards towards the coccyx. The fold of integument between the incisions, together with the portion of sphincter it covered, were removed, and the muscle was thus shortened by half its length. The wound was united from one side to the other by three points of suture. On the sixth day after the operation the sutures were removed. Union was nearly complete, but a fistulous passage remained from the anus to the coccyx. On the fifteenth day the woman had not passed any fæces. On the next day, the want of defecation being felt, in order to prevent any straining, the bowels were relieved by the curette. On the forty-first day the patient, who before the operation could not retain her fæces, kept an injection during the whole day; there was no more prolapsus; the opening had become of the ordinary size; but the finger when introduced did not experience the energetic contraction of the sphincter which occurs in the normal state. With the exception of a slight protrusion of mucous membrane, the cure was complete in August.

On certain Abscesses occurring in different parts of the Body during the course of Diseases of the Urinary Organs. By M. Civiale.[2]—M. Civiale has observed that, sometimes during the progress of gonorrhœa, and other diseases of the urethra, also in affections of the prostate gland, and when there is strangury or dysuria, or foreign bodies in the bladder, certain parts of the body, particularly the extremities and the larger joints, are attacked with pain, which may be dull and diffused, or acute and circumscribed,

[1] Gazette Médicale, Juin 20, 1840; and Br. and For. Med. Rev. Oct. 1840, p. 568.

[2] Bulletin Gén. de Thérapeutique, Avril, 1840; and Br. and For. Med. Rev., Oct. 1840, p. 574.

which is at first generally supposed to be rheumatic, but which terminates in the formation of large abscesses, differing in some respect from common phlegmons. M. Civiale states that these cases have escaped the observation of authors, but says that since his attention has been directed to them, he has met with numerous examples. When these accidental pains first make their appearance, the patient complains of a peculiar "*empâtement*" (?) and numbness of the part, which come on before any swelling is apparent. These local symptoms are accompanied with lassitude, weakness, anxiety, and general constitutional disturbance, which does not correspond at all with the degree of pain, which in the early stages is generally slight and diffused. As the case advances the pain becomes more acute, there is complete loss of appetite and sleep, great prostration of strengh, the pulse being sometimes scarcely to be felt; rapid emaciation, dry tongue, troublesome cough, and lastly delirium. The disease often commences with a febrile paroxysm, which may return at regular intervals or be continued. Together with these symptoms the urine is often of a deep orange colour, and is excessively fetid, and when this state of the renal secretion is met with, the case is always very serious. Local redness and swelling of the painful part, with evidence of the formation of matter, frequently do not make their appearance till a late stage of the disease.

One peculiarity in this affection is a tendency in the local disease to shift its position, and it often appears in different places at the same time. The suppuration in distant organs is often accompanied also with the formation of an abscess in the scrotum, perineum, or neighbourhood of the urethra or bladder, which, however, form no communication with the urinary passages.

With regard to the causes of this disease, M. Civiale has not remarked any predisposing circumstances. All the cases occurred in adults. In four there was stricture of the urethra, during the treatment of which affection (in one case by cauterisation, and in the three others by dilatation,) the abscesses were developed. In a fifth case there was serious disease about the neck of the bladder, and in several others there was urinary calculus, which had been broken down by the operation of lithotrity. In all the cases there seemed to have been some considerable irritation or inflammation of the urethra, or neck of the bladder, which appeared to give rise to the distant affection.

The peculiar state of the system, accompanied by the formation of these abscesses, is attended with considerable danger, and M. Civiale lost the first two patients which he treated.

The treatment found most efficacious was scarification of the whole of the affected surface in the early stage (from which a reddish or yellow coloured serum is generally discharged for several days in considerable abundance,) and then the use of emollient poultices. This plan will sometimes cut short the disease, but if the inflammation has reached the deep-seated cellular tissue of the limb between the muscles, this texture becomes indurated, and a vast abscess soon forms; several large deep incisions must now be made completely through the affected parts, which will allow of the escape of the matter, and also unload the distended vessels. The surgeon must not always wait for the sense of fluctuation to be apparent before he makes his incisions, for great relief will be afforded by cutting through the inflamed and indurated tissues before pus has actually been secreted, and the progress of the disease may be thus arrested. M. Civiale does not make any remarks concerning the general or constitutional treatment of the patient, but we presume that this must be conducted on common principles.

Successful Case of Cæsarian Section, with Suture of the Uterus. By Dr. Godfroy, of Mayence.[1]—On the 27th of March, 1840, Dr. Godfroy was called by M. Renant to a poor woman who had been two days in labour.

[1] Gazette Médicale, 11 Juillet, 1840; and Br. and For. Med. Rev Oct. 1840, p. 578.

The term of gestation was stated to have passed over by fifteen days. The patient was of small stature, of a slight and rickety constitution, with that malformation of the hips which gives the peculiar characteristic walk to women so affected. She was married to a man of similar constitution, and her age was forty-two. Dr. Godfroy having passed the entire hand into the vagina, discovered a portion of the cranium in the form of a wedge, the bones of which crossed each other at the sutures. The summit of the head was wedged between the sacro-vertebral angle (which was very prominent) and the pubis, this space not exceeding two inches. Delivery even with the assistance of the forceps being therefore impossible, and the woman beginning to give way under the excessive pains, it was necessary that something should be promptly undertaken. Three modes presented themselves: first, to perforate the cranium and remove the trunk piecemeal; secondly, to perform symphysootomy; and, lastly, the cæsarian section. From the peculiar circumstances of the case, the first of these methods seemed fraught with great danger, and the life of the infant being ascertained was another objection. It appeared, further, impossible to afford a sufficient opening to give play to the forceps by dividing the symphysis, and the cæsarian section was therefore attempted. The patient was placed upon a table furnished as a bed, with her head depressed, and her legs raised and everted. Every means being adopted, by emptying the bladder, &c., to render the skin lax and fix the uterus, the operator made a vertical incision from the umbilicus almost to the pubes. The integuments having been divided tissue by tissue, the peritoneum was opened cautiously, and lifted up while the incision was prolonged upwards and downwards. The folds being turned back, the uterus was carefully opened about the median line. The placenta was fixed to the anterior part of the uterus, and was readily recognised, seized, and withdrawn by the hand. The infant was very carefully removed by the feet, and the umbilical cord divided; the child uttered a cry and was saved. Its weight was about six pounds and a half. No vessel required tying. The uterus was held near the abdominal orifice and cleaned, and then being left to itself, contractions immediately came on, and all hemorrhage ceased. The wound in the uterus, however, did not readily unite, but left a considerable space between the edges. Some points of suture were therefore applied by means of common needles, armed with double waxed threads, and passed through the whole thickness of the wound. The reunion was perfect, and then the uterus was entirely abandoned. The abdominal orifice was closed in a similar manner through the whole thickness of the integuments, even including the peritoneum. The edges were perfectly united, except at the lower part, where a small orifice was left for any suppuration which might ensue. Charpie and a strong bandage being applied, the patient was placed in bed with her head and knees elevated.

Some slight fever arose, and the patient was twice bled. During the two succeeding days the usual sanguinolent evacuations issued from the vulva. The dressings were removed on the 1st of April, and were found scarcely soiled by suppuration. Fresh charpie, steeped in cream, was applied and left till the 6th, when the union appearing firm, the threads of the sutures were all divided, and the wound simply dressed till the 24th, when there existed no trace of suppuration. There was no fever, and the patient left her bed on that day, taking care to sustain the cicatrix with a bandage. The cure was perfect.

M. Desormeaux and others have strongly objected to the sutures of the uterus. Dr. Godfroy thinks their danger has been exaggerated. At all events, the rapidity of the cure in this case, without the occurrence of any accident, is very remarkable.

Case of Puerperal Fever, with Unusual Sloughing. By Dr. Löwenhardt, of Prenzlau.[1]—The patient was a woman thirty-four years old, previously healthy and strong, who was delivered with the forceps on the 12th of November. Her five previous labours had been natural, and nothing dangerous had occurred in them, except that after the last she had had severe peritonitis.

On the 15th of November all the symptoms of peritonitis, which appeared to be especially severe in the hypogastric region, came on after exposure to cold. On the 16th and 17th she was largely bled three times, and numerous leeches were applied; purgatives and calomel and opium were also administered, but no relief was afforded. Large mercurial inunctions were then added, but the mouth was not at all affected, and the symptoms grew daily worse. On the 21st, no benefit having yet resulted from the treatment, she took thirty drops of the oil of turpentine. It produced considerable pain and heat in passing urine, but on the next day there appeared to be a slight improvement in both the general and local symptoms.

On the morning of the 23d, however, though the general condition of the patient seemed to be improved, the author found a gangrenous spot as large as the palm of the hand three inches below the umbilicus, and on cutting into it to a depth of two inches, he discovered that not the slightest pain was produced. A part of the slough was removed, and pyroligneous acid, with a decoction of bark and aromatics, was ordered to be applied. Bark was also given internally with muriatic acid.

The sloughing, however, continued, and on the 27th it was found necessary to remove a portion of the abdominal walls as large as the whole hand. On the day after, an opening formed into the intestine on the left side, where the sloughing extended most deeply, and a large quantity of fecal matter was discharged through it.

The patient, who had previously appeared stronger than might have been expected, now became much depressed, and as the constant fecal discharge through the wound maintained a permanent irritation, it was determined to try to close the opening into the intestine. The operation undertaken for this purpose was however unsuccessful; the intestine was found to be perforated in at least three places, and no mode of remedying its condition could be imagined. The patient became gradually more and more weak; on the 7th of December a considerable hemorrhage from the uterus occurred, and she died a few hours after.

On examination there was found at the aperture where the sloughing had passed through the abdominal walls, an excessively thickened, inflamed, and partly gangrenous layer of peritoneum, and beneath this the immensely swollen omentum, to which about six inches of small intestine were adherent. In this portion of intestine, which was highly inflamed, there were three apertures, of which the largest was about two inches and a half long, and was directed towards the left ilium; a second opened to the right and upwards; and a third, of an inch in diameter, was situated at the lower part of the intestine. Their edges were uneven and swollen, but appeared cicatrising.

On the Etiology and Treatment of Congenital Luxations and Pseudo-Luxations of the Femur. By Dr. J. Guerin.[2]—I have established it as a fact, in my History of Deformities of the Osseous System, that the greater number of congenital articular contractions are the product of primitive muscular retraction. . . . . I conclude: 1. That congenital luxations of the hip-joint are, like club-foot, torticolis, and spinal deviations, the pro-

[1] Casper's Wochenschrift, Mai 16, 1840; and Br. and For. Med. Rev. Oct. 1840, p. 579.
[2] Gazette Médicale de Paris, No. iv., 1840; and Br. and For. Med. Rev., Oct. 1840, p. 576.

duct of primitive muscular retraction, and that the kind of luxation depends upon the direction in which the retraction happens. 2. There exists an order of deformities of the hip-joint not hitherto indicated, and to which I apply the term *pseudo-luxations*, because they look like luxations, although the head of the bone remains in the cotyloid cavity. These vary as do the complete luxations, and from the same causes. 3. The essential treatment consists in a division of the retracted muscles. I have thrice performed this operation with success. The congenital luxations and pseudo-luxations of joints depend in the majority of cases on primitive muscular contraction, which takes place in three different modes: by shortening, by paralysis, and by stoppage of development of the retracted muscles; and the different varieties of these deformities are, like those of the neck, the spine, and the foot, the effect of this retraction differently distributed in the muscles of these parts. In a girl aged fourteen years, I divided the biceps, semi-tendinous, semi-membranous, and rectus internus, for two incomplete luxations of the knee, produced by primitive retraction of these muscles; on each side there was subluxation of the tibia backwards upon the condyles of the femur, rotation of the limb outwards through the space of about one fourth of a circle, and an inclination outwards of the leg upon the thigh of about sixty degrees. The rotation outwards, the lateral inclination and the gliding backwards of the tibiæ, were reduced on the day following the operation to the simple normal flexion of the leg upon the thigh, and since that period there remained nothing more than a certain degree of permanent flexion of the joint. In order to convince those who feel any doubt respecting the safety with which these operations may be performed, I may add that, on the same day, I successively divided in the young female above mentioned thirteen muscles or tendons beneath the skin, for the relief of certain deformities from which she suffered; on the following day she felt no kind of pain nor indisposition, nor was there any symptoms of inflammation in any one of the divided parts.

On the Funic bellows-sound. By Dr. Dietrich.[1]—In addition to the placental murmur, and those accompanying the pulsations of the fœtal heart, there is a third sound occasionally to be heard in pregnant women, and one which is well ascertained to have its seat in the umbilical cord. It is a single murmur of the bellows species, and synchronous with the first sound of the fœtal heart. Dr. Dietrich is of opinion, herein agreeing with others who have examined this subject, that the sound depends on diminution of the calibre of the umbilical arteries, either through pressure or stretching of the funis, or both combined. He gives cases illustrating its production under these different conditions. In the first, wherein the bellows-murmur is presumed to have been the effect of pressure, the umbilical cord was of the unusual length of twenty-four inches and a half, twisted once round the neck and tightly knotted in its middle third; the knotted part having acquired from its tightness a white, shining, tendinous appearance. In two cases exemplifying the occurrence of the sound in consequence of a tense state of the cord, this was only ten and fourteen inches long, and this unusual shortness led to greater tension in the former instance from the presentation being a breech one; in neither case was the cord twisted round the neck. In the example of production of the sound from pressure and stretching combined, the navel-string was twenty-three inches long, of normal structure, and wound twice round the neck; the accoucheur was obliged to cut it during delivery, finding it impossible to slip it over the head. Here the peculiar sound was invariably heard on every examination; an unusual circumstance, attributed to the tightness with which the cord was twisted, whereby change of position or other occurrences, sometimes causing a temporary cessation of the sound, were rendered of none effect.

[1] Medicinische Zeitung, No. xxxvii. 1839; and Br. and For. Med. Rev. July, 1840.